

REMARKS

[0010] Applicant respectfully requests reconsideration and allowance of all of the claims of the application. The status of the claims is as follows:

- Claims 1, 6-8, 13-21, and 23-29 are currently pending;
- Claims 2-5, 9-12 , 22 and 30 are canceled;
- Claims 1 and 13 are currently amended;
- Claims 14 and 21 are previously presented; and
- Claims 6-8, 15-20 and 23-29 are original.

Claims 1, 14 and 21 Comply With § 112 2nd Paragraph

[0011] Claims 1, 14 and 21 stand rejected under 35 U.S.C. § 112, ¶ 2, as allegedly being indefinite. The Applicant, for the sole purpose of expediting prosecution and without acquiescing in the propriety of the Office's rejections, herein amends claim 1 as shown above. The amendment recites that the parsing continues until file format recognition "or until all available component parsers within the compound parser have parsed the input file". Accordingly, it is possible to not recognize a file format or type, and to have a "don't know" status. Applicant respectfully submits that this amendment renders the § 112 rejections moot.

[0012] Claim 14 does not recite "continuing to parse ... until recognized". Accordingly, claim 16 would appear to not have the problem indicated. If this rejection is maintained, the Applicant requests further clarification.

[0013] Similarly, claim 21 does not recite “continuing to parse ... until recognized”; accordingly, claim 21 would not appear to have the problem indicated. If this rejection is maintained, the Applicant requests further clarification.

Overview of the Application

[0014] The Application describes parsing a file to recognize a file format repeatedly with component parsers within a compound parser. In one aspect of the application, the search for virus code is based in part on discovering a file format for the input file. The file format could be PDF, doc (Word), jpeg, vsd (Visio) or others (see Applicant’s paragraph [0017] and numerous other locations). Each component parser within the compound parser is configured to recognize a file format of an input file. If recognized, the component parser is configured to detect viruses within the environment of the recognized file format. The compound parser continues to parse, repeatedly applying a sequence of component parsers, until the file format is recognized or all available component parsers are used. A status report could be sent. For example, if the file format was recognized (e.g. PDF) then virus code was either found or not found by the component parser within the compound parser associated with the PDF format. Alternatively, if no component parser within the compound parser was able to recognize the format of the input file, then a “don’t know” could be sent as status.

Cited Documents

[0015] The following documents have been applied to reject one or more claims of the Application:

- Chen, US 5,960,170.

Overview of Chen, US 5,960,170

[0016] Chen, US 5,960,170, describes event triggered iterative virus detection, wherein a plurality of virus detection objects are produced, such as virus detection objects tailored for different file types (column 11, lines 35-45) or virus detection objects that are based on known virus signature (column 11, line 45) or based on violation of different rules, such as inclusion of suspect command sequences (column 11, lines 45-48).

[0017] Significantly, Chen discloses that virus detection objects are configured for different virus types, which may reside in different file types. Thus, Chen discloses transmission of virus detection objects configured to detect different types of viruses in some file type (e.g. executable files, as in column 11, lines 37-40). However, Chen does not disclose that the virus detection objects parse “an input file to recognize a file format of the input file” and that the virus detection modules are each “configured for *recognition of a specific file format* by which an input file is configured” (emphasis added).

[0018] Looked at another way, Chen discloses that the virus types can be divided up into groups, and that virus detection modules can be configured to attack each type. For example, virus detection modules can attack viruses that are adapted for hiding in executable files or Word files, viruses with known signatures and viruses that violate a set of rules (see Chen at column 11, lines 22-51).

[0019] However, nothing in Chen discloses that virus detection modules “parse an input file to recognize a file format of the input file”. Chen appears to assume that the file format of a given file is known, or that having the extension “exe” somehow

guarantees that the file is an executable file. Chen fails to disclose parsing the file to recognize the file format of the input file.

Chen Fails to Anticipate Claims 1, 14 and 21

[0020] Claims 1, 14 and 21 stand rejected under 35 U.S.C. § 102(b) as allegedly being anticipated by Chen. Applicant respectfully traverses the rejection.

Independent Claim 1

[0021] The Applicant submits that the Chen reference does not show or disclose at least the following features as recited in Claim 1 as presently amended (with emphasis added):

- **“parsing an input file to recognize a file format of the input file”**

[0022] The Applicant respectfully submits that Chen does not show or disclose parsing an input file to recognize a file format of the input file. The Office points to column 11, where Chen discloses iterative production and transmission of virus detection modules (column 11, lines 22-23).

[0023] Referring to column 11, the modules are tailored to look at specific file types such as exe or doc (column 11, lines 37-43) or to look for certain signature viruses (column 11, line 45) or to look for suspicious data that appears to be virus like due to “rule” of what viruses may do (column 11, lines 45-48). However, the Applicant respectfully maintains that Chen does not show or disclose “parsing an input file to recognize a file format of the input file”, as recited by the claim. Thus, the Applicant respectfully submits that Chen fails to show or disclose parsing an input file to recognize a file format of the input file. Such parsing would reveal, for example, if the input file is a

PDF or a jpeg. This is not a concern of Chen, and is not disclosed by Chen. Accordingly, Chen does not disclose “parsing an input file to recognize a file format of the input file”.

[0024] The Applicant submits that the Chen reference does not show or disclose at least the following features as recited in Claim 1 as presently amended (with emphasis added):

- **“wherein each of the plurality of component parsers is configured for recognition of a specific file format by which an input file is configured”**

[0025] The Applicant’s claim recites “recognition of a specific file format”. The Office cited column 11, suggesting that the virus detection modules taught by Chen recognized file formats. The Applicant respectfully submits that Chen discloses that virus detection modules detect viruses on different types of files (exe or doc, for example), but Chen does not disclose that the virus detection modules actually recognize different file formats. That is, Chen discloses that:

[0026] “Similarly, routines for the detection of viruses that reside in “executable” files (such as those that have the file extension .exe) are provided such that they can be accessed separate from routines used for the detection of macro viruses (such as those that implement the WordBasic programming language, typically reside in application data files, and include extensions such as .doc or .dot).”

[0027] Accordingly, Chen discloses routines for detection of viruses in different file types, but the Applicant respectfully submits that Chen fails to show or disclose component parsers “configured for recognition of a specific file format by which an input file is configured”. Thus, Chen’s routines detect viruses in exe or doc files, but Chen

does not disclose component parsers is configured for recognition of a specific file format (e.g. PDF or exe) by which an input file is configured.

[0028] The Applicant submits that the Chen reference does not show or disclose at least the following features as recited in Claim 1 as presently amended (with emphasis added):

- **“adding an additional component parser configured to recognize an additional file format and executable code if present in a file of the additional file format”**

[0029] The Applicant respectfully submits that Chen does not show or disclose “adding an additional component parser configured to recognize an additional file format”. The Applicant has amended Claim 1 to additionally recite that additional component parsers are “configured to recognize an additional file format”. As discussed above, Chen does not show or disclose the concept of “recognizing additional file formats”. Chen does disclose different virus detectors for different file formats (column 11, lines 35-45), but does not show or disclose “adding an additional component parser configured to recognize an additional file format”.

[0030] The Applicant submits that the Chen reference does not show or disclose at least the following features as recited in Claim 1 as presently amended (with emphasis added):

- **“continuing to parse the input file until a component parser recognizes the file format of the input file”**

[0031] The Applicant's claim 1 recites "continuing to parse the input file until a component parser recognizes the file format of the input file". The Office points to column 13, lines 38-55 of Chen. However, at indicated passage in Chen discloses only that a repeated, iterative process is undertaken to discover if a virus exists. This is completely different than parsing to find the input file format. The Applicant's recited "continuing to parse the input file until a component parser recognizes the file format of the input file", could result in determination that the file was a jpeg or a PDF. In contrast, Chen discloses (at column 13, lines 38-55) that scanning the input file can reveal virus signatures (strings of suspicious data) within the input file.

[0032] The Applicant submits that the combination of cited art does not teach or suggest at least the following features as recited in Claim 1 as presently amended (with emphasis added):

- **"sending a don't-know status when the file format of the input file was not recognized"**

[0033] The Applicant's claim 1 recites "sending a don't-know status when the file format of the input file was not recognized". The Office points (see rejection of Claims 16, 22) to column 8, lines 17-24. However, in this passage, Chen fails to disclose (1) the "don't know status" and (2) tying the "don't know status" to failure to recognize a file format. Again, Chen has different approach to virus detection, which does not involve parsing to recognize a file format.

[0034] The Applicant submits that the combination of cited art does not teach or suggest at least the following features as recited in Claim 1 as presently amended (with emphasis added):

- **“wherein adding an additional component parser comprises instructions for identifying a new file format”**

[0035] The Applicant has amended claim 1 to recite elements previously seen in dependent claim 30, “wherein adding an additional component parser comprises instructions for identifying a new file format”. The Office points to column 11, lines 21-50. The Applicant respectfully submits that Chen does not show or disclose any manner by which an additional virus detecting object (i.e. an additional component parser) is added. Moreover, Chen does not show or disclose that an additional object would comprise instructions for identifying a new file format. Accordingly, the Applicant respectfully submits that Chen is deficient to support the rejection of this passage of former claim 30, now recited in claim 1.

Dependent Claims 6-8 and 13

[0036] Claims 6-8 and 13 ultimately depend from independent claim 1. As discussed above, claim 1 is not anticipated by the cited document, and is therefore patentable. Therefore, claims 6-8 and 13 are also patentable over the cited documents of record for at least their dependency from a patentable base claim. These claims may also be patentable for the additional features that each recites.

Independent Claims 14 and 21

[0037] Claims 14 and 21 recite elements similar to those recited by Claim 1, and are allowable for many of the reasons discussed above. These claims have not been amended, and therefore retain the same scope as previously presented.

Independent Claim 14

[0038] In particular, claim 14 recites, in part (emphasis added):

- **"identifying a new file format, wherein ability to recognize the new file format is functionality to be extended to a compound parser"**
- **"wherein each component parser is configured to recognize a specific data file format"**

[0039] The Applicant respectfully submits that Chen does not show or disclose at least the above elements, recited by Claim 14, for the reasons discussed above with respect to Claim 1. Accordingly, the Applicant respectfully requests allowance of this claim, or alternatively, for the Examiner to call so that appropriate amendments may be discussed.

Independent Claim 21

[0040] In particular, claim 21 recites, in part (emphasis added):

- **"wherein each component parser within the compound parser is configured to recognize executable code within a specific file format"**
- **"sending a don't-know status when the file format of the input file was not recognized"**

[0041] The Applicant respectfully submits that Chen does not show or disclose at least the above elements, recited by Claim 21, for the reasons discussed above with respect to Claim 1. Accordingly, the Applicant respectfully requests allowance of this

claim, or alternatively, for the Examiner to call so that appropriate amendments may be discussed.

Dependent Claims 15-20 and 23-29

[0042] Claims 15-20 and 23-29 ultimately depend from independent claims 14 and 21. As discussed above, claims 14 and 21 are not anticipated by the cited document, and is therefore patentable over the cited documents. Therefore, claims 15-20 and 23-29 are also patentable over the cited documents of record for at least their dependency from a patentable base claim. These claims may also be patentable for the additional features that each recites.

Conclusion

[0043] Applicant respectfully requests reconsideration and prompt issuance of the application. If any issues remain that prevent issuance of this application, the Examiner is urged to contact the undersigned representative for the Applicant before issuing a subsequent Action.

Respectfully Submitted,

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/David S. Thompson/

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